PATENT CLAIMS

1. Method for producing elongate support element (21) with associated seats (22, 23) for replacement structure (9) in human body (jaw) (2), via which seats (22, 23) the support element can be applied to implants (or to spacers on these implants), where the longitudinal axes (centre axes) of the seats connect with or are parallel to the longitudinal axes (centre axes) of the implants in order to satisfy set accuracy of fit requirements (2/100 mm), the method comprising the stages of:

a) identification (13) and possible modelling (11) of the dental situation (1) in question,

b) supplying information (16) extracted from stage a) to computer equipment,

c) operating the computer equipment to use the supplied information (16) and further information (17) input to the computer equipment to simulate and determine the structure (4, 4') of the support element in or at the replacement structure (9),

d) extracting, from the computer equipment (15), milling coordinates information (data) (19) used for controlling the milling of a blank in milling equipment (20),

e) transmitting the milling coordinates information (data) (19) to the milling equipment (20),

f) controlling the milling equipment to produce the support element from the blank,

characterized in that

f) the milling equipment, with the aid of the said milling information (data), in addition to executing the support element shape determined in the computer equipment from the blank, can also be used for control in order to mill out the said seats (22, 23) directly from the blank/support element material.

2. Arrangement for producing elongate support element (4, 21) with associated seats for replacement

structure (9) in human body (jaw) (2), via which seats the support element can be applied to implants (or to spacers on these implants) (3), where the centre axes (24, 25) of the seats are arranged to connect with or be parallel to the centre axes (8, 9) of the implants so that set accuracy of fit requirements (2/100 mm) are satisfied, and where the arrangement comprises identification member (12) and possibly modelling member (10) for identification (13) and, respectively, modelling (11) of the respective dental situation, computer equipment (15) for receiving information (16) extracted from the identification and modelling, and first transmission members (14) for transmitting the extracted information to the computer equipment (15), with which, on the one hand, the structure (21) of the support element and the positioning in or at the replacement structure can be simulated and can be determined by means of the extracted information and further information (17) input to the computer equipment, and, on the other hand, milling coordinates information (data) (19) for controlling the milling of a blank in milling equipment (20) can be executed with the aid of the said extracted and input information, and second transmission members (15a) are arranged for transmitting the milling coordinates information (data) to the milling equipment (20) for controlling the latter to produce the support element from the blank, characterized in that the milling coordinates information (data) (19) is designed, in addition to executing the support element shape determined in the computer equipment from the blank using the milling equipment, also to be used to control the milling equipment to shape and position the said seats (22, 23) directly in the blank/support element material (27).

3. Product produced using the method and the arrangement according to Patent Claims 1 and 2, respectively, in the form of elongate support element (21) for replacement structure (9), for example in the form of a dental bridge, for the human body, where the

support element is designed with seats (22, 23) via which the support element can be applied to implants (3) and/or to spacers on these implants, where the centre axes (24, 25) of the seats connect with the centre axes (8, 9) of the implants so that fixed accuracy of fit requirements (of at least about 2/100 mm) result, characterized in that the support element is made of homogeneous material (27) and in that each seat wall (26a) is executed directly from the homogeneous support element material (27).

4. Product according to Patent Claim 3, characterized in that each seat wall consists of a surface (26a) ground directly in the homogeneous material.

5. Product according to Patent Claim 3 or 4, characterized in that the material strength around each seat has essentially the same material strength as the rest of the support element material (27).

6. Product according to Patent Claim 3, 4 or 5, characterized in that each seat wall (26a) is formed directly from the support element material (27) without intermediate layers of material compositions or material alterations.

7. Product according to any of Patent Claims 3 - 6, characterized in that each seat wall (26a) has the same chemical composition as the rest of the support element material (27).

8. Use of recessing (26) directly in the material (27) of a blank in conjunction with the production of a dental product from the blank in milling equipment (20), characterized in that the recessing is used for receiving the seats (22, 23) in the product in the form of a support element (4) included in tooth replacement structure (9), the seats (22, 23) of which with set accuracy of fit requirements (at least about 2/100 mm) are to be applied to implants located in the human body and/or to spacers on these implants.

9. Use according to Patent Claim 8, characterized in that the recessing (26) is used for forming a seat

in the support element in milling equipment (20) which is fed milling coordinates information in the form of milling coordinates data (19) executed in computer equipment (15) and attributable to identification data (16) and supplementary data (17) fed to the computer equipment (15).

10. Use according to Patent Claim 8 or 9, characterized in that the recessing (26) is used for forming a seat in support element (21) in milling equipment (20) which is fed integrated milling data (19) on the support element design and seat design and the seat positions in the support element.